
Land & Air & Water

Volume 10 Number 4
Winter 2000



Kentucky Natural Resources and Environmental Protection Cabinet

**Kentucky Natural Resources
and
Environmental Protection
Cabinet**

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Dear Readers:

When you receive each issue of *Land, Air & Water*, one of the first things you probably notice is the colorful photographs on the cover. You look at them for a moment and if you're unfamiliar with the scenes or species shown, you may flip to the contents page and check out the information provided about each photo and the photographer.



Over the years, these photographs have come from a variety of sources. Natural Resources and Environmental Protection Cabinet employees have proven their photographic skills many times over by providing bright, colorful images of Kentucky's scenic beauty and a variety of wildlife and plants. Also, photographic work by professional photographers and *Land, Air & Water* subscribers has graced the cover.

This year, starting with the spring 2000 issue, I would like to put photographs from you, our readers, on the cover. But first, there are a few guidelines that you should be aware of:

- 1) No one can be paid for the use of his or her photographs.
- 2) All photographs must feature only nature scenes, wildlife or landmarks of Kentucky.
- 3) Negatives should accompany any photographs submitted.
- 4) Slides are preferred.
- 5) Digital photos should be taken at the highest resolution possible (at least 300 dpi). They may be submitted via e-mail to cynthia.schafer@mail.state.ky.us or mailed on a diskette.
- 6) Each issue will feature photographs depicting the particular season during which the issue is published.
- 7) Pertinent details about the photographs must be included, such as where the photo was taken, who the photographer was, etc.

All cover photographs will be chosen based on quality and image selection and at the discretion of the editor. Slides and photos will be returned after each issue is published.

So, get out your cameras and start taking photos of our great state. I look forward to receiving your entries. You just may see your photo on the next issue of *Land, Air & Water*.

**Land
Air&Water Online**

Visit *Land, Air & Water* magazine on the World Wide Web at
www.nr.state.ky.us/nrepc/landairwater.htm

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Switzer Bridge in Franklin County, a well known Kentucky landmark, top; a male cardinal, Kentucky's state bird, left; and a horse enjoys a brisk winter day on a farm in Franklin County, right. Photographs by Frances Kirchhoff, Natural Resources and Environmental Protection Cabinet employee. Ms. Kirchhoff is also a freelance photographer.



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The drought of 1999 **9-10**



Secretary Bickford begins second term of service **Back cover**

Successful reclamation project unveiled in Harlan County

By Heather Frederick
Public Information and Education Branch



An aerial view of the former Dollar Branch mining site in Harlan County. Photo by Steve Hohmann

Management and Leasing, which faced forfeiture of its bond for failure to properly reclaim the mining site. The owners of the property, a neighboring property owner, the cabinet and the federal Office of Surface Mining began to take legal action to remedy the problem. Then, all the parties involved reached an agreement in November 1998 that led to the successful reclamation of the site.

Martiki Coal Corporation (now 17 West Mining) agreed to reclaim the Dollar Branch

“The transformation here is really dramatic . . . This wouldn’t have been possible if the many parties involved in this case had not found a way to work together.”

Secretary James E. Bickford

Pine Mountain, Kentucky, is as beautiful as its name sounds. But until recently, an eyesore tarnished the small town in Harlan County. The former Dollar Branch mining site sat unreclaimed in the scenic area, and it wasn’t a pretty sight.

Now, cooperation has led to a major change. In an October news conference, James E. Bickford, secretary of the Natural Resources and Environmental Protection Cabinet, announced the completion of reclamation work at the former mining site.

“The transformation here is really dramatic,” Bickford said. “This wouldn’t have been possible if the many parties involved in this case had not found a way to work together.”

Kentucky Field Office Director Bill Kovacic, federal Office of Surface Mining, agreed. “The outstanding reclamation we are observing today is the end result of many responsible individuals and companies. The patience and perseverance of many people were pushed

to the limits to get to where we are today,” he said.

Dollar Branch Coal Corporation (d.b.a. Solid Capital Co.) developed the site in the early 1980s. The company’s permit was later transferred to Coal

site to fulfill a stream mitigation obligation it had at an unrelated site. Work began at the Dollar Branch site in November 1998. The former coal processing and refuse disposal

site has been covered, graded, seeded, fertilized and mulched to promote revegetation.

Secretary Bickford talks with Nina Martin, one of the landowners. Photo by Heather Frederick



\$4 million project transforms Western Kentucky site

By Heather Frederick
Public Information and Education Branch

It used to be called “Ketchup Lake” because of a red, acidic, 30-acre pit that scarred the landscape. Now, this former mining site in Western Kentucky looks amazingly different. That’s because one of the biggest mining reclamation projects in Kentucky history has come to a successful end in Hopkins County.

The changes to the former Pleasant View mining



(Top) It’s easy to see how “Ketchup Lake” got its name. (Left) The Pleasant View mining site before its reclamation. (Bottom) This aerial view shows how dramatically different “Ketchup Lake” looks after reclamation. Photos by Ben Enzweiler



site were unveiled in November at a news conference held by James E. Bickford, secretary of the Natural Resources and Environmental Protection Cabinet. “This site will once again live up to its name,” Bickford said. “The work of our Abandoned Mine Lands program has restored a pleasant view to a site that was once an eyesore in this community.”

The 250-acre site was first surface mined in the 1940s. In the 1960s, it was used as a coal refuse disposal area. When all the work was done, a terrible mess was left behind and acidic water from “Ketchup Lake” was flowing into nearby Greasy Creek, killing almost all aquatic life.

Rust of Kentucky began its cleanup of the site in January 1998 under a \$3.97 million contract. Funding for the project came from a reclamation fee that is paid on all coal mined in Kentucky. Rust of Kentucky moved 2.5 million cubic acres of coal refuse and earth as part of its reclamation work. The project is now complete and “Ketchup Lake” was eliminated as part of the

“The work of our Abandoned Mine Lands program has restored a pleasant view to a site that was once an eyesore in this community.”

Secretary James E. Bickford

site’s restoration.

The owner of the land, CONSOL Energy, donated the property to the city of Madisonville. “With this site’s great potential as a recreational facility, the name ‘Ketchup Lake’ one day will likely become just a distant memory,” said Ronald E. Smith, CONSOL Energy’s executive vice president. “Ketchup Lake is a prime example of what cooperation between federal and

state governments, coal operators and local citizens can do to make their communities better places to live,” said Kathy Karpan, director of the federal Office of Surface Mining. “This project shows what innovative thinking and creative ways of restoring land and water can do to improve the environment.”



Governor Patton addresses the audience during the 24th Annual Governor's Conference on the Environment. Photo by Creative Services

Saying now is the time to clean up Kentucky, Gov. Paul E. Patton outlined his vision for improving the state's environment during his address at the 24th Annual Governor's Conference on the Environment in November.

"We've made progress, but we need to do more and it's now time to take the next step," the governor said in his speech at Jenny Wiley State Resort Park in Prestonsburg. "What we must have now is universal solid waste curbside service

Governor puts environmental cleanup on front burner

and universal participation," the governor added.

In outlining his cleanup plan, Governor Patton said the state must work with local governments to ensure that all Kentuckians dispose of their trash properly and that each county must have a recycling program available for its citizens.

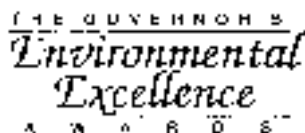
"Counties or incorporated areas must provide not only for a solid waste pickup service, but also ensure that every citizen is participating in the collection program," Patton said. "The disposal or recycling of all normally generated household waste must be included in this service."

Noting that previous environmental programs have covered business and industry, Patton said cleanup programs must now focus on the responsibility of all citizens in the state.



Secretary James E. Bickford (left), George Gilbert, Division of Waste Management (center) and Governor Patton stand beside the "Patton Sled." The sled, developed by Gilbert, was constructed to assist in the cleanup of large items from illegal dumps. Many illegal dumps are located on hill-sides, and the sled provides the transportation for trash to be hauled rather than carried by hand up the steep slopes. Patton suggested the use of a sled when he assisted in the cleanup of an illegal dump last year.

Photo by Richard Thomas



Twelve honored for environmental excellence

Each year during the Governor's Conference on the Environment, Environmental Excellence Awards are presented to those individuals or organizations who have gone "above and beyond" in dedication to the stewardship of our great Commonwealth. Sixty-two nominations were submitted for consideration. Awards were presented to the following Kentucky entities:

Lexington-Fayette Urban County Government—Environmental Excellence Award for Forestry. Lexington-Fayette Urban County Government was recognized for its *Reforest the Bluegrass* initiative. This initiative is the largest single urban reforestation project in the nation. It promotes the planting of seedlings in stream corridors as part of the

storm water management program. More than 1,000 volunteers planted 35,400 seedlings within 80 acres of floodplain area.

Hopkins County Conservation District—Environmental Excellence Award for Soil Conservation. The district took on a number of projects that include ongoing efforts to acquire agriculture water quality plans from all affected landowners, purchasing and distributing 2,000 seedlings and trees and co-hosting an annual farm tour. The district is also involved in Resource Conservation and Development projects to reduce erosion and improve communities' standards of living.

Van Melle USA—Environmental Excellence Award for Energy Conservation. This candy manufacturer is located in Erlanger and has taken several

steps to make its facility more energy efficient. Van Melle uses a 200-ton, closed-loop, geothermal heating and cooling system and estimates that it reduces its electricity bills by 30 to 40 percent each year. A solar thermal system provides hot water for offices, and roof monitors control the quality and quantity of natural daylight in the building. Sensors and timers turn lights off when offices are empty. A 210-foot wind turbine is in the planning stages to help provide power for the facility.

Ms. Sally Brown—Environmental Excellence Award for Heritage Land Conservation. Ms. Brown's accomplishments include many years of service to the Kentucky State Nature Preserves Commission, State River Assessment Team and

Continued on next page

Twelve honored for environmental excellence

the National Audubon Society. She provided funding for a 500-acre nature preserve on the Kentucky River Palisades that is appropriately named "The Sally Brown Nature Preserve."

Circle S Coal Co. Inc.—Environmental Excellence Award for Mining Reclamation in Western Kentucky. This Madisonville company purchased a mine site in Hopkins County that had not been reclaimed. The eyesore included acid water, open pits, household garbage and no topsoil. Circle S Coal Co. mined the area, eliminated the open pits, disposed of the garbage and treated the water until it reached acceptable levels.

Stone Mining Co.—Environmental Excellence Award for Mining Reclamation in Eastern Kentucky. This West Virginia company used an innovative approach to reclaim a site in rural Pike County. Stone Mining created a lake that spans about 21 acres and has about 6,200 feet of shoreline. It is stocked with bluegill, catfish and large-mouth bass. This site near McVeigh also includes paved roads that lead to picnic shelters and barbecue grills. The county plans to add basketball, tennis and volleyball courts to the recreational facility.

The Louisville Post Office Processing and Distribution Center—Environmental Excellence Award for Leadership in Pollution Prevention. The center recorded a major accomplishment in its effort to reduce the amount of hazardous waste it generates. From 1992 to present, the center has cut its generation of hazardous waste by more than 99 percent. It tries to keep hazardous chemicals from entering the workplace by reviewing products before they are purchased to make sure they don't contain any of the EPA's 17 targeted chemicals. The center also recycles a wide range of items including paper, batteries, wooden pallets and radiators from its vehicles.

Lexmark International—Environmental Excellence Award for Industrial Environmental Leadership. Lexmark increased the amount of materials it recycles by about 70 percent. The Lexington company encourages its customers to

recycle by offering them an incentive to return their empty laser printer cartridges. Lexmark also reduced its generation of hazardous waste by more than 300,000 pounds and has decreased the amount of fuel oil stored on site by more than 500,000 gallons.

Avery Smith—Environmental Excellence Award for Community Environmental Leadership. As a private citizen and geologist, Mr. Smith was the driving force behind the completion of Owensboro's Wellhead Protection Plan which is required for the approval of the Daviess County Water Supply Plan. He spearheaded a widespread effort to identify all potential sources of contamination within the wellhead protection area and donated his time to organize, train and assist the dozens of other volunteers who gathered information on contaminant sources. He compiled this information on a map used by the Green River Area Development District.

The Fern Creek Woman's Club—Environmental Excellence Award for Environmental Education. This Jefferson County group launched a project called The Environmental Art Club. This collaborative effort with Fern Creek Elementary School used several methods to help children develop a love and concern for the environment. The students studied Monet and created their own wildflower impressions. They plotted the layout of a Kentucky wildflower garden and maintained a vegetable garden throughout the summer with help from the Woman's Club. The group harvested the vegetables and donated them to a local café.

Somerset Recycling Services Inc.—Environmental Excellence Award for Closing the Recycling Loop. This Somerset company collects, processes and supplies recycled feedstock to manufacturers in and out of state. This includes recycled plastic, nylon and corrugated cardboard materials. The company also purchases products made with recycled materials that include mud flaps and tire chocks made from recycled rubber, garbage cans and liners from recycled plastic, and office supplies and containers from recycled fibers.

The Honorable Jody Richards—Secretary's Award. Speaker of the

House of Representatives Jody Richards has spent the last 25 years of his life in public service as a state legislator. In that time, he held various leadership positions and has been involved in some of the most important public policy issues affecting Kentucky.

In the 1998 General Assembly, Richards sponsored a resolution that created a statewide cleanup effort called "Commonwealth Cleanup Week." It was a great success with 108 counties participating and 378 dumps cleaned up.

Employees honored for outstanding dedication

The Natural Resources and Environmental Protection Cabinet is made up of a group of employees dedicated to the cabinet's mission of "protecting and preserving Kentucky's air, land and water resources." An awards program was created to recognize those individuals, nominated by their fellow workers, who go above and beyond the call of duty. Plaques were presented to the following seventeen cabinet employees for 1998:

Department for Natural Resources: Steven J. Kull, Division of Forestry, and Sheila K. Vaughan, Division of Conservation.

Department for Surface Mining Reclamation and Enforcement: Lloyd Adams, Division of Abandoned Mine Lands, London Regional Office (RO); Pamela L. Carew, Division of Field Services; Timothy D. Kelley, Division of Field Services, Middlesboro RO; Betty O. Miller, Commissioner's Office; and Margaret M. Webb, Division of Permits.

Nature Preserves Commission: Joyce Bender.

Department for Environmental Protection: Glenda F. Abrams, Commissioner's Office; Betty S. Beshoar, Sue L. Davis, Ronald E. Houpp and Joseph R. Ray, Division of Water; Hamid Rezvanian and Linda A. Shearer, Division of Waste Management.

Office of Legal Services: J. Alec Mackenzie.

Office of the Secretary: Vanessa Mullins.

Forestry employees track creature with destructive appetite

By Thomas Gilmour
Division of Forestry

Most homeowners are familiar with the threat posed by termites. The pesky insects can literally eat you out of house and home. But there's another winged creature that's chewing up valuable wood, this time in Kentucky's forests. Division of Forestry employees have teamed up with the U.S. Department of Agriculture to track the gypsy moth in the Commonwealth.

The gypsy moth represents a serious threat to hardwood trees in Kentucky's urban and rural forests. The moths cause significant damage and even death to common Kentucky trees including oak, hickory, ash, crabapple and maple. Monitoring the gypsy moth allows workers to determine how the moth is entering the state and find ways to more quickly control its population.

In June, Division of Forestry personnel set traps for the gypsy moths in designated areas along a statewide grid system, with approximately one trap placed every four square miles. The traps contained a chemical to lure male moths into the trap. Since the female moth cannot fly, only male moths are captured. Employees checked the traps twice during the summer, collected them in mid-August and compiled a final tally of captured moths.

The monitoring results were dramatically different from the two previous years.

A total of 507 moths was captured in 1999, compared to just 42 in 1998 and 98 in 1997. The highest numbers of moths were found in Boyd and Bracken counties.

One explanation for the large increase in 1999 could be significant windstorms that occurred at the time of the summer moth flights. The strong winds could have easily carried the moths to uninfested areas. While the number of moths captured in 1999 is significantly higher than the two previous years, an infestation is declared only when two lifestages of the gypsy moth are found in the area. To date, the division has not located two lifestages of the moth.

Division of Forestry employees will conduct a survey this winter to locate any

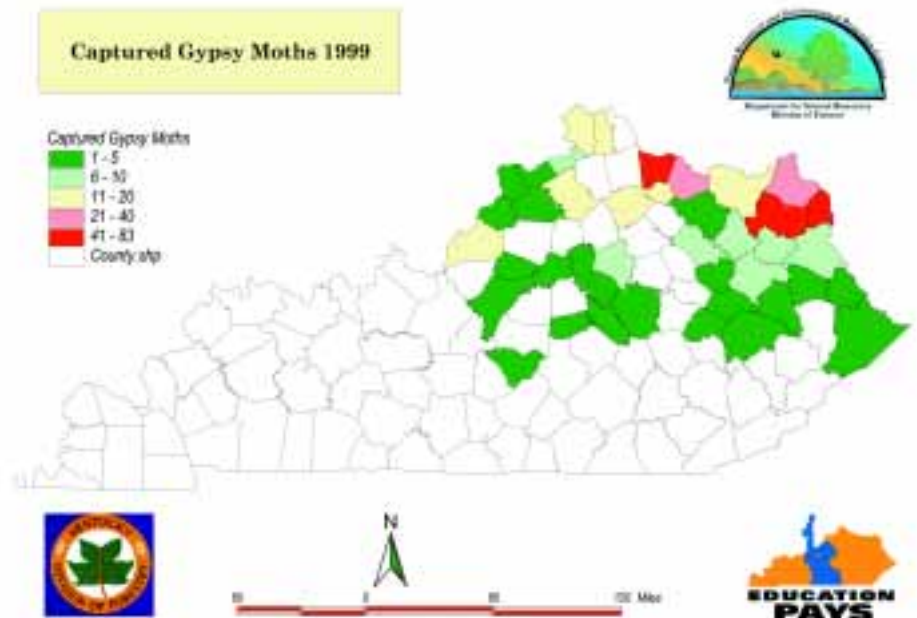
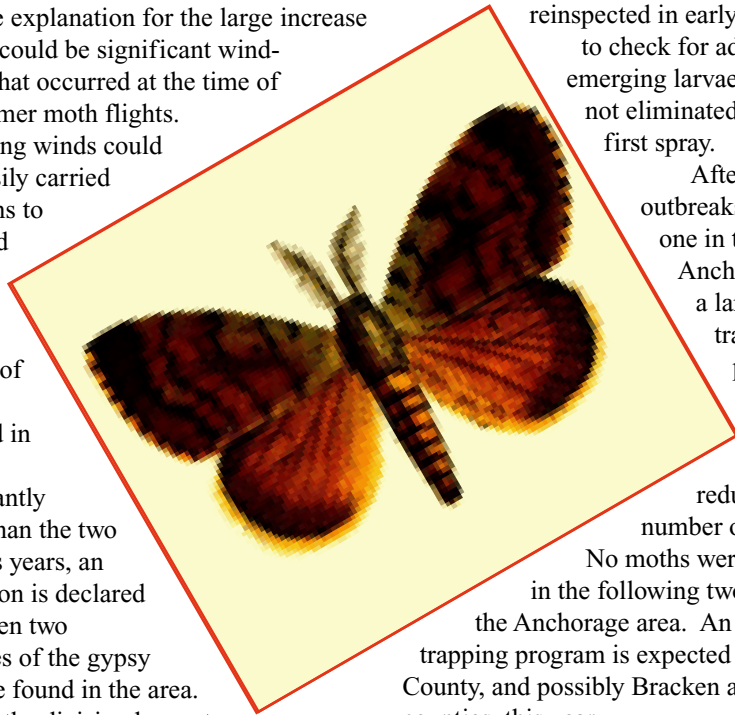
egg masses laid by female gypsy moths. If egg masses are found, insecticide will be used to kill the eggs. The areas where egg masses are found will be

reinspected in early spring to check for additional emerging larvae that were not eliminated by the first spray.

After previous outbreaks like the one in the Anchorage area, a large trapping program was conducted to reduce the number of moths.

No moths were captured in the following two years in the Anchorage area. An intensive trapping program is expected for Boyd County, and possibly Bracken and Carter counties, this year.

The chart below indicates the number of gypsy moths captured during 1999. Bracken, Carter and Boyd counties (highlighted in red) captured the largest numbers of moths this year.



Go Natural for Just \$10 More!



Drive Home Your Support of the Outdoors.

For more information contact the Kentucky Heritage Land Conservation Fund Board at 502-584-2194.

Tell your county clerk you want
a Kentucky nature license plate.

You have three choices:

- a Kentucky warbler on
a tulip poplar branch
- a cardinal on a Kentucky
coffea branch
- a bobcat in rhododendron

The tax deductible \$10 is used
to purchase land from willing
sellers for preservation of
significant natural areas.



Cabinet uses Internet to catch illegal dumpers

By Heather Frederick
Public Information and Education Branch

There's a new tool in the Natural Resources and Environmental Protection Cabinet's (NREPC) war on illegal dumping: the World Wide Web.

Cabinet investigators hope the Internet will help them identify illegal dumpers that haven't been located.

In November, the Public Information and Education Branch created a new page on the cabinet's Web site. It featured four cases where people were caught on camera dumping their trash illegally. A picture of each dumper was "frozen" on the computer screen so visitors to the Web site could try to identify the dumpers.

Visitors who think they can help identify the dumpers are instructed to call 1-888-NO-DUMPS, the cabinet's toll-free hotline to report illegal dumpers or dump sites.

The NREPC Office of the Inspector General places hidden cameras at dump sites across the state and records the dumpers' illegal activities. Normally, investigators are able to question people in the community and determine the identities of those caught on tape. But sometimes, despite numerous efforts, the identities of dumpers cannot be determined. That's where the cabinet Web site comes in. Investigators hope it will help them solve the cases that have been stopped by dead ends.

To see the latest photos of illegal dumpers investigators need help identifying, go to <http://www.nr.state.ky.us/nrepc/dumpphotos.htm>.

OUR SUCCESSFUL ILLEGAL DUMPING INITIATIVE

Since February 1997

Notices of Violation issued: 2,033
Illegal dump sites investigated: 2,545
Illegal dump sites cleaned up: 610
Tons of trash cleaned up: 788

(Right) These men are throwing bags of garbage over the Hwy. 527 overlook in Marion County. They arrived at the site in a Ford Ranger that looks like an early-to-mid 1980s model.



(Left) These men were also dumping trash at the Hwy. 527 overlook in Marion County. They're driving a pickup truck with a modified front bumper. It may be a Nissan or Mazda light-colored truck. Cabinet photos

Grant program offers funding for non-profit hospitals and schools

By Karen Landry
Division of Energy

More than \$900,000 is now available for hospitals and schools that want to save energy. The money comes from the new funding cycle of the Kentucky Division of Energy's Institutional Conservation Program (ICP). The 50-50 matching grant program offers funding for technical assistance studies (TAs) and energy conservation measures (ECMs). Funding is available for public and private non-profit schools and hospitals.

The TA grants help the institution identify operations and maintenance changes that have an immediate payback and energy conservation measures that have a long-term payback. The ECM grants provide for the design, acquisition and installation of major building improvements recommended in the TA.

The Kentucky Division of Energy (KDOE) is now accepting applications for TAs and ECMs. The deadlines for applications are Feb. 15, 2000, for TAs and March 15, 2000, for ECMs.

For the first time, guaranteed Energy Savings Performance Contracts can be used in conjunction with the ICP grants.

Funding for ICP grants comes from the Kentucky Energy Assistance Fund. Since the program began in 1978, more than \$21 million has been awarded. Participating institutions have saved an average of 25 percent on their annual energy costs.

For more information, contact Eddie Riddle, KDOE, at (502) 564-7192 or (800) 282-0868, or e-mail him at eddie.riddle@mail.state.ky.us.

Poster contest winners honored in Frankfort

By Karen Landry
Division of Energy

Thirteen young artists from Kentucky schools were honored Nov. 19 during Energy Awareness Week ceremonies in the Capitol Rotunda in Frankfort.

"Energy for the New Millennium" was the theme of this year's poster contest sponsored by the Kentucky Division of Energy. Poster art by the fourth-, fifth- and sixth-grade winners will appear on the year 2000 calendar distributed by the Kentucky Division of Energy.

This year's winners were:

COVER WINNER: Artwork by Sarah Bauer, fifth grade, Hiseville Elementary, Barren County, was selected for the cover of the desk calendar.

Artwork by these students appears on the poster calendar and the desk calendar:

FOURTH GRADE: Paige Shrull, Simpson Elementary, Simpson County; Whitney Ravellette, Sedalia Elementary, Graves County; Kate Douglas, Highland Elementary, Daviess County; Shannon Brown, Christ the King Elementary, Fayette County.

FIFTH GRADE: Hollie Kustes, Minors Lane Elementary, Jefferson County; Ashton Wurzel, Cedar Grove Elementary, Bullitt County; Josh Wolfe, Southern Elementary, Pendleton County; Shanna Markwell, Bremen Elementary, Muhlenberg County.

SIXTH GRADE: Laura Thompson, Hiseville Elementary, Barren County; Chelsey Aikins, Caldwell County Middle School, Caldwell County; Kimberly Steadham, North Drive Middle School, Christian County; Laura Henley, St. Martha Elementary, Jefferson County.



Left to right, front row: Shanna Markwell, Sarah Bauer, Hollie Kustes, Shannon Brown, Whitney Ravellette and Ashton Wurzel; second row, Laura Thompson, Josh Wolfe, Paige Shrull, Chelsey Aikins, Laura Henley and Kimberly Steadham; third row, Secretary James E. Bickford. Kate Douglas was unable to attend the ceremony. Photo by Creative Services

Energy Awareness Week recognizes the importance of the development and efficient use of Kentucky's energy resources for the continued economic growth and well-being of all Kentuckians.

For a free 2000 "Energy for the New Millennium" calendar, contact the Kentucky Division of Energy, 663 Teton Trail, Frankfort, KY 40601 or call (502) 564-7192 or (800) 282-0868.

Conservation employees pitch in for farmers

By Martin Bess
Division of Conservation

A recent special assignment hit close to home for two Division of Conservation employees. Curtis Kirk and Tom Peterson, tobacco farmers themselves, worked with burley tobacco quota holders and growers who wanted to apply for money from the national tobacco settlement. As state employees, Kirk and Peterson have often worked with family farms and tobacco operations. They also know tobacco issues well.

They helped their farming colleagues by staffing the Kentucky Tobacco Help Line last fall. State government personnel manned the hotline Sept. 13-Oct. 8 to help growers meet the deadline for filing claims.

Help line workers explained eligibility requirements and the application process to callers. The hotline was open 13 hours a day, with at least 20 people staffing it at all times.

The National Tobacco Growers Settlement Trust was established by Phillip Morris Inc., Brown and Williamson Tobacco Corp., Lorillard Tobacco Co. and the R.J. Reynolds Tobacco Co. to compensate tobacco quota owners and growers for income they lost due to the settlement. Kentucky tobacco farmers will share about \$113 million in first-year payments from the fund.

With the assistance of hotline workers, more than 125,000 applications

for settlement payments were sent out to Kentucky farm operators. About 103,000 were completed and returned by the Oct. 8 deadline. This cooperative effort helped to ensure that owners and operators would have their checks by Dec. 31. Workers on the Kentucky Tobacco Help Line fielded 25,000 phone calls during the application process.



The drought of 1999: water woes, for

Cooperation, new planning, advance warnings helped Kentuckians

By Maleva Chamberlain
Division of Water

It would be difficult to find someone in Kentucky who was not affected by the drought of 1999. Its impact was seen and felt across the Commonwealth. Homeowners faced water restrictions, some businesses had to shut down, farmers saw crops wither in their fields, and the green grass of summer was replaced by a brown landscape in many parts of the state.

The state Division of Water played an integral role in keeping the state informed, helping farmers and residents find the help they needed and assisting local communities in planning ahead as conditions continued to deteriorate.

By the first of June, the Division of Water was warning that the Bluegrass Region and Southeast Kentucky were in moderate drought conditions, and the rest of the state was close behind. Dry conditions progressed and rainfall was a rare occurrence.

On Aug. 9, Gov. Paul E. Patton declared a water emergency for all or part of 53 counties because of the water shortage and the lack of relief anticipated. In signing the declaration, Patton said conditions “endanger the public health and safety and threaten the public welfare” and “these threats require the balancing of water rights and the availability of water among users.”

At some point during July, August and September, every area of the state was in extreme drought according to the Palmer Drought Severity Index.

The Palmer Drought Severity Index classifies drought conditions in four categories: mild, moderate, severe and extreme. It is a **meteorological** drought index, measuring how far a specific region is below normal

precipitation. The index calculates precipitation and temperature data, as well as the local available water content of the soil. Due to climatic differences, what is considered a drought under this definition in one region may not be a drought in another region.

September and October are ordinarily the driest months of the year in Kentucky. In 1999, these months saw streams flowing at small fractions of what would have been normal for that time of year. At the end of October, the Licking River at Catawba dipped to only 5 percent of normal for the period; the Salt River at Bardstown went to 7 percent; the Green River at Munfordsville, 15 percent; the Cumberland River at Williamsburg, 11 percent; and the Kentucky River at Lock and Dam #10 near Winchester, 10 percent.

Despite the length and severity of the drought, community drinking water systems coped and survived because of

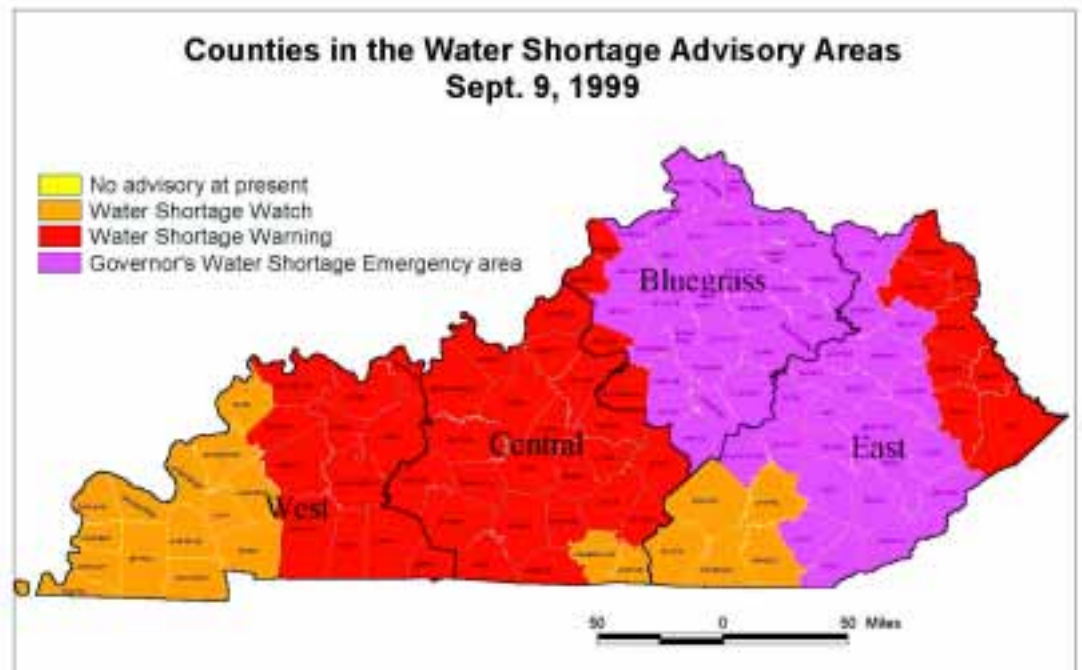


This intake structure at the Bert T. Combs Lake shows low water levels supplying the city of Manchester. Cabinet photo

several positive factors:

Water supply plans - Following the drought of 1988, the General Assembly passed legislation requiring every county in Kentucky to prepare a water supply plan. The deadline for those plans, which include both long-term planning and water shortage response plans, was July 15, 1999, just in time for the latest drought. As many as 125 water systems went to advisory, alert or critical phases of their

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Forest fires burden Kentucky

Drought sparks worst forest fire season in a decade

By Gwen Holt
Division of Forestry

The problems caused by the drought of 1999 did not end with water shortages. The drought also brought an early start to the 1999 forest fire season. Flames spread over more than 152,000 acres of the state, making 1999 the worst year for forest fires since 1987. The fires were caused by things as simple as exhaust systems on vehicles parked in dry grass, heat from farm machinery and electric fences.

In November, a sharp increase in forest fires forced the Division of Forestry to send employees from western Kentucky to the eastern and southeastern areas of the state. The division also had to ask for help from the Kentucky National Guard, the U.S. Forest Service (USFS) and the members of the Southeastern Forest Fire Compact.

The Southeastern Forest Fire Compact is an agreement between nine southern states to share skilled wildland fire fighters and equipment during emergencies. Many of the states that assisted Kentucky were also experiencing an increased number of fires in their own forests. The Commonwealth received help from Alabama, Florida, Georgia, Mississippi, North Carolina, South Carolina, Tennessee and Virginia.

The Kentucky National Guard provided both aerial and ground crews to the firefighting effort. Six Blackhawk helicopters used 660-gallon buckets to drop water on many of the fires. More than 100 National Guard members battled fires on the ground.

The U.S. Forest Service provided assistance with fires bordering the Daniel Boone National Forest. Inmate crews from Bell County Forestry Camp, East Kentucky Correctional Complex, Otter Creek and the Lee Adjustment Center also

worked on fire lines in southeastern Kentucky. Local fire departments played a key role in fighting the fires and providing structure protection.

Gov. Paul Patton issued an emergency declaration on Nov. 18, banning all outdoor burning statewide until conditions improved. The governor directed all state and local law enforcement agencies to enforce the order.

The fires of 1999 burned thousands of acres, but few structures were damaged and no serious injuries were reported.

Investigators found 666 of the forest fires were intentionally set. In response to the arsons, the division set up a special prevention team to inform and educate the

public. The team focused on the need for community members to protect their homes and lives by reporting arsonists. The Arson Hotline (1-800-27-ARSON) offers a reward of up to \$1,000 for information leading to the arrest and indictment of an arsonist. Kentucky State Police, the Kentucky Department of Fish and Wildlife Resources, local sheriffs and the Natural Resources and Environmental Protection Cabinet's Office of the Inspector General teamed

up to investigate suspected cases of arson. Police arrested one man for a fire in Perry County. They also took one man and a juvenile into custody for a fire in Wolfe County.

<u>Year</u>	<u>Number of Fires</u>	<u>Acres Burned</u>
1989	1,188	23,755
1990	1,266	22,437
1991	1,514	68,904
1992	1,297	20,574
1993	1,068	18,126
1994	1,802	50,263
1995	2,097	67,828
1996	973	18,066
1997	913	14,475
1998	1,140	29,224
1-99 thru 12-05-99	2,440	152,541



(left photo) Timothy L. Estep, left, and David F. Scarse, Jr., Division of Forestry emergency fire fighters, try to control a fire on Laden Trail near Putney, Kentucky. Estep is from Loyall, Kentucky, and Scarse is from Baxter.

(bottom photo) Terry Franks, also an emergency fire fighter from Loyall, uses a leaf blower to remove leaves and debris from the fireline on the Laden Trail.

Special thanks to Debbie Caldwell, Harlan Daily Enterprise, for the use of her photos.

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Cooperation, new planning, advance warnings helped Kentuckians

Continued from Page 9

water shortage response plans during the summer and fall. The plans have four phases:

Advisory: systems request voluntary conservation.

Alert: non-essential water use is banned, such as watering lawns and washing cars.

Critical: socially and economically essential water uses are restricted (for example, car washes and Laundromats operate under restrictions, and restaurants serve water only on request).

Rationing: controlled allocation of water to meet basic needs. No system implemented the rationing phase of its water shortage response plan during 1999.

Advance warnings - The Kentucky Water Shortage Response Plan provides that the Kentucky Natural Resources and Environmental Protection Cabinet (NREPC) shall announce a Water Shortage **Watch** when water supply data, such as rainfall levels, reservoir levels, streamflow and the Palmer Drought Index, indicate the potential for water shortages; NREPC announces a Water Shortage **Warning** when water shortages are occurring in an area. Advance warnings helped communities prepare to implement their water shortage response plans.

Consumer conservation - Kentuckians rose to the occasion and devised numerous water conservation techniques. Many people used buckets to catch water in showers and the kitchen sink. They washed their hands over the buckets, rinsed vegetables over the buckets and poured pasta and vegetable-cooking water into the buckets. This recycled water was used to irrigate plants in the yard. One person bought PVC pipe and two trash cans to reroute water from a washing machine. From one load of laundry, he caught almost 60 gallons of water that he used to water a flower bed owned by a neighborhood association. Another person installed a T-joint and shut-off valve to divert water from a shower into a trash can. He was able to catch 10 to 15

gallons of water per person per shower and use it to water plants in the yard. Many people bought soaker hoses to water shrubs at deeper levels. Those hoses can be covered with mulch and left in place.

The media and the Internet - Newspapers, television and radio stations helped spread information and keep Kentuckians aware of current drought conditions and what they could do to help. The Division of Water maintained a Web site (<http://water.nr.state.ky.us/wsp/wsp10.htm>) and updated it weekly to provide current drought information. It received as many as 5,000 "hits" a day.

Cooperation - Many agencies cooperated to share information and expertise. They included the National Weather Service, state climatologist, U.S. Army Corps of Engineers (Cincinnati, Huntington, Nashville and Louisville), U.S. Geological Survey, Tennessee Valley Authority, Ohio River Basin Commission, Kentucky Division of Emergency Management, Kentucky State Police, Kentucky

Division of Forestry, Kentucky Division of Conservation, Kentucky River Authority, Kentucky National Guard, governor's office, U.S. Department of Agriculture and the Kentucky Water Resources Research Institute.

New water management capability in the Kentucky River - The Kentucky River Authority now has valves in several locks and dams in the Kentucky River. These allow water to be stored upstream and moved downstream as needed. The valves were opened for the first time in 1999 (see related story below).

These resources combined to help communities be prepared and stay alert during 1999 to deal with water supply issues.

See more information about the drought at these Web sites:

<http://www.nws.noaa.gov/om/drought.htm>

<http://md.water.usgs.gov/drought/define.html>

<http://www.wagwx.ca.uky.edu/drought.html>

<http://enso.unl.edu/ndmc/>

To find current information about the drought in Kentucky, visit

<http://water.nr.state.ky.us/wsp/WSP10.htm>

To search for your community's water source, visit

<http://water.nr.state.ky.us/wsp/>

See information about flow in Kentucky streams at this Web site:

http://130.11.24.1/rt-cgi/gen_tbl_pg

Ways to measure a drought:

Meteorological -- how far a specific region is below normal precipitation.

Agricultural -- when the amount of moisture in the soil no longer meets the needs of a particular crop.

Hydrological -- when surface and subsurface water supplies are below normal.

Socioeconomic -- physical water shortage begins to affect people, curtailing their domestic and industrial uses.

Drought leads to historic event on Kentucky River

**By Stephen Reeder, Executive Director
Kentucky River Authority**

Lexington definitely felt the pinch of the drought of 1999. Even with substantial water restrictions, the city found its water supplies running low. Lexington's shortage of water led the Kentucky River Authority (KRA) to do something it had never done before—open some of the valves on the locks and dams in the Kentucky River.

The KRA's Valve Operating Plan allows the use of the valves to transfer water from upper pools of the Kentucky River to lower pools in order to satisfy the needs of water users under drought conditions. The valves were opened on Sept. 13, 1999, mainly to help the Lexington area, which is the largest user of water on the Kentucky River.

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Division of Forestry employee honored

By Steve Dalton and Cary Perkins
Division of Forestry

For the first time ever, a Kentuckian has been named as the North Central Tree Farm Inspector of the Year. The American Forest Foundation gave that 1999 honor to Glen Dattilo, an employee of the Kentucky Division of Forestry's South Central District in Campbellsville. Dattilo had previously been named Kentucky's Outstanding Tree Farm Inspector seven times.

As a 24-year employee of the Division of Forestry, Dattilo has also earned the bronze, silver and gold hard hat awards from the American Forest Foundation. He has certified more than 150 new tree farms while re-inspecting all of his old ones every five years. He has completed the most inspections performed by any forester in Kentucky since records have been kept.

Dattilo is enthusiastic about showing children the forest and the benefits of tree

farming. He presents programs in schools in a four-county area and participates in the Kentucky Forest Leadership Program for high school students each summer. In 1992, Dattilo was also recognized with the Natural Resources and Environmental Protection Cabinet's Outstanding Employee Award. "Glen has worked diligently on the tree farm program in his district for many years and is certainly deserving of this prestigious award," said Mark Matuszewski, director of the Division of Forestry.

The American Tree Farm System is a community of landowners linked by a desire to manage their woodlands in a way that recognizes all the values people associate with forests including wildlife, water and recreation, as well as timber. For over 50 years the American Tree Farm System has certified more than 70,000 tree farms and recognized landowners for their



Glen Dattilo

commitment to sustainable forest management. To certify forestland, a forest owner must develop a forest management plan based on strict standards and guidelines and pass an inspection by one of 8,000 professional foresters who are volunteer inspectors. Currently, Kentucky has over 900 landowners enrolled in the Tree Farm Program who are meeting these standards and actively and sustainably managing their forestland for the future.

To learn more about the Tree Farm Program, contact the Division of Forestry at (502) 564-4496.

Kentucky students and teachers get "SWAT" training

By Karen Landry
Division of Energy

It sounds like a scene from a movie—students and teachers joining forces to form a "SWAT" team. But in this case, the term "SWAT" doesn't refer to a specialized group of police officers. Instead, it stands for "Students Weatherization Audit Training," also known as "SWAT Jr."

High school students and teachers from across Kentucky took part in the training Sept. 26-28 at the Kentucky Leadership Center on Lake Cumberland. The Kentucky Division of Energy sponsored hands-on activities and lectures to help teachers and students understand how to use energy more efficiently in their schools.

The goal of the training is to instill a strong energy conservation ethic in the participants.

"This is a motivational workshop in which the students get to learn and then they go back into the classroom and they're able to share that knowledge with other students," said Robin Tacker, a teacher at Graves County High School. "We then go out into the community and further extend that knowledge and hopefully teach people about energy and ways to conserve it."

In addition to being a valuable learning experience, the

SWAT program can also lead to significant energy savings at the participants' schools. When students and teachers return to their schools, they form a "SWAT team." The teams analyze their schools' facilities and recommend ways to reduce energy consumption, save money and benefit the environment.

"It was a great learning experience, not just one more thing to memorize out of a textbook. It was hands-on, and everyone loved it," said Peggy Welch, a teacher at West Jessamine High School.

The program may also result in some career choices for the students who participate. During the training, students and teachers work with professionals from utilities, energy service companies, government and universities. This gives students a chance to learn about the career opportunities that are available to them in energy-related fields.

The SWAT Jr. program is funded with state and federal dollars.

For more information, call Gregory Guess at (502) 564-7192 or (800) 282-0868 or e-mail him at gregory.guess@mail.state.ky.us.



Conservation districts welcome FFA convention to Kentucky

By Martin Bess
Division of Conservation

The 72nd National Future Farmers of America (FFA) Convention came to Louisville, Kentucky, for the first time ever in October.

This is especially significant because this convention has been held in Kansas City, Missouri, since it began in 1928. This convention brought in 47,000 FFA members, advisors, supporters and guests to Louisville for recognition, celebration, motivation, business and elections that culminated a year's activities.

FFA is a national organization of 450,752 young people preparing for leadership and careers in the science, business and technology of agriculture. FFA is a school-based part of agricultural education programs in public schools and is federally chartered by Congress through the U.S. Department of Education. The organization has 7,240 local chapters located throughout the United States, Puerto Rico, Guam and the Virgin Islands.

Many Kentucky conservation districts welcomed the convention by helping to stage the first-ever National Environmental and Natural Resources Career Development Event. This competitive activity tests general knowledge of national and

global environmental issues. It was one of many educational activities at the National FFA Convention in which FFA members practice the lessons taught in agricultural education classes. This event focuses on testing students' problem-solving abilities in environmental and natural resources areas. Areas of concentration are soil profiles, water and air quality, waste management, environmental analysis and ecological succession. Each team in the event has competed with other chapters in its state for the privilege of participating at the national level.

The team from China Grove, North Carolina, placed first against 23 other teams at the convention. Rounding out the top five were Oregon, Idaho, Nebraska and Washington. Kentucky did not have a team entered in this event.

The assistance and teamwork of many agencies made this event a success. The agencies involved were Kentucky Farm Bureau Federation, Kentucky Soil and Water Conservation Commission, conservation districts from Bullitt, Woodford, Franklin, Monroe and Spencer counties, Kentucky Association of Conservation Districts, Kentucky Department for Natural Resources, Kentucky Department of Fish and Wildlife Resources, Natural Resources Conservation Service/USDA, Cooperative Extension Service, Kentucky Division of Water and Kentucky Division of Conservation. The agencies' knowledge, experience, professionalism and hard work were recognized by the FFA National Steering Committee as the reason for the success of this inaugural event.

Important facts about FFA

Members are junior high, high school and post-secondary students, ages 12-21. Ninety percent of the members are in grades nine through 12. FFA's mission is to make a positive difference in the lives of students by developing their potential for leadership, personal growth and career success through agricultural education. Local, state and national activities and award programs provide opportunities for students to apply knowledge and skills learned in the classroom. Student officers work closely with their advisors to conduct business at the chapter, state and national levels. Advisors are agricultural education teachers in public high schools. There are more than 11,000 FFA chapter advisors.



Students perform soil tests while taking part in the annual FFA convention. Photo by Steve Coleman

Division of Water employee honored

Ken Cooke is known by teachers across Kentucky for his work with the Division of Water's Water Watch program. In October, some of those educators honored him at the annual conference of the Kentucky Association for Environmental Education (KAEE).

KAEE President Joe Baust presented Cooke with a plaque that recognized his successful adopt-a-stream program. Baust said Water Watch is probably the most well-known environmental education program in Kentucky. Cooke uses it to teach thousands of students, teachers and others to value and monitor the lakes and streams of the Commonwealth.

One of the features of the Water Watch program is its ability to engage people in their communities' water quality issues. The program electronically connects Water Watch groups across the state and allows them to share information. In 1998-99, more than 100 teachers were trained in water quality testing techniques.

Water Watch's "Water on the Web Workshop," developed in cooperation with the Kentucky Department of Education's Educational Technology Group and PRISM



Ken Cooke, standing foreground, instructs students as they take samples of water. Cabinet photo

teachers, focuses on resources available to stream teams through the Internet.

From Kentucky's largest cities to its smallest towns, water quality is a growing priority, thanks in large part to the work of Ken Cooke and many others in the Division of Water. Ken may be reached at ken.cooke@mail.state.ky.us.

Drought leads to historic event on Kentucky River

Continued from Page 11

Only valves at Dams 11, 12 and 13 were opened. The action doubled the river flow to Pool 9, which supplies Lexington's water. The valves remained opened until rainfall relieved the water flow and volume problems on Oct. 11. The opening of the valves resulted in only small decreases in water levels at two upstream pools. Pool 11 dropped by two inches and Pool 12 fell by five inches.

The Valve Operating Plan is based on the Water Supply Model developed by the Kentucky Water Resources Research Institute. The plan was completed in 1999 and includes the main stem of the river from Beattyville to Lexington. The plan will be expanded to the rest of the river when the Water Supply Model is adjusted to include these pools. The plan is an engineered release of water in upper pools that allows for orderly regulation of water flow. It is activated according to established low-flow conditions called "triggers." Each trigger calls for an incremental adjustment to the lock and dam valves.

The Valve Operating Plan allowed commercial and personal life to continue without major inconveniences in the Lexington area. Lexington government leaders say that without the Kentucky

River Authority's Valve Operating Plan, there would have been major business closings, and personal water use would have been drastically curtailed.

DEP Louisville Regional Office relocates

By Janet Goins, Department for Environmental Protection

The Louisville Regional Office of the Department for Environmental Protection has moved. The new address is 9116 Leesgate Road, Louisville, KY 40222-5084. The telephone number remains (502) 425-4671.

The building is located in an office center off Hurstbourne Parkway and Whittington Place, not far from its previous location. Both the divisions of Water and Waste Management have offices in this location. Special areas have been designed to meet the needs of each division, such as a conference room where DEP

personnel from other areas can meet and regional office personnel can consult with facilities that need assistance.

The DEP staff moved to the new facility on Aug. 13.



Photo submitted by Keith Sims

Watershed Watch

Volunteers make a difference in their communities

By Maleva Chamberlain
Division of Water

How clean is your stream? That's the question Watershed Watch volunteers ask as they gather at rivers across the state during the year. Watershed Watch provides workshops in basic stream monitoring to train volunteers, then the volunteers monitor more than 300 sites in the state.

Some 900 volunteers and more than 300 organizations took part in Watershed Watch activities in 1999. Those organizations provided volunteers, technical assistance, instruction and financial resources to improve the state's waterways.

Each local Watershed Watch group operates independently. The steering committee of each group develops its own goals based on community needs. Local groups cooperate through an Interbasin Coordinating Committee to develop scientific protocols, training resources, financial resources, data management, organizational support and leadership development that ensure delivery of services.

Volunteers then gather each year at fall conferences to discuss their year's work and make recommendations about how to make streams cleaner. Conferences take place in each watershed that is currently part of the state's Watershed Management Initiative.

In 1999, conferences were held in the Kentucky River Basin, the Licking River Basin, the Salt River Basin, the Upper Cumberland Basin and the Four Rivers Basin. Some 50-60 volunteers typically attend each conference.

See the Watershed Watch web page at <http://water.nr.state.ky.us/watch> to find out more about Watershed Watch. Find out what groups have been doing, view the data they have collected and see what their plans are for the year 2000. Volunteers are always in need! You can register online to be part of a Watershed Watch group in your own watershed.

Watershed
Watch volun-
teers get their
feet wet.



Watershed Watch
volunteers also work in
labs. Russ Barnett
watches as Tina
Montgomery, Kevin
Smith and Ralph Reiss
prepare lab samples for
analysis at the Univer-
sity of Louisville Life
Sciences Labs. Photos
provided by the Division of
Water

Funds available for projects to solve water pollution problems

By Rosetta Fackler
Division of Water

About two-thirds of the streams in Kentucky are affected by nonpoint source pollution. Some sources of nonpoint source pollution are runoff from agricultural land, logging sites, abandoned mine lands, construction sites, lawn care practices, parking lots and other paved surfaces. Other sources of runoff pollution are improper residential wastewater treatment systems, in-stream or sinkhole disturbances and litter.

The Kentucky Division of Water is seeking proposals to help solve the problem of runoff pollution in communities across the state. Proposed projects should promote the use of practices to manage and control this type of water

pollution. They should also include education, technical or financial assistance, training, technology transfer and/or enforcement. Funding, which can be used for up to 60 percent of a project's total costs, is provided by the U.S. Environmental Protection Agency through an upcoming Section 319(h) Nonpoint Source Implementation grant. The Division of Water is especially interested in projects that improve the water quality of an entire watershed.

For more information, contact Donna Cirillo, Division of Water, Nonpoint Source section at (502) 564-3410 or write to her at 14 Reilly Road, Frankfort, KY 40601-1189.

Protect yourself from a hidden hazard

By Susan Weaver
Division for Air Quality

It leaves no trail.

It has no smell.

It stalks around your own home

without a sound.

It can slowly strangle you . . . so slowly you may not even notice.

Carbon monoxide (CO) is a silent killer in the home. Each year, carbon monoxide poisoning kills almost 300 people in the United States. This clear gas is produced by fuel-burning appliances and vehicles and has no taste or smell.

It can come from gas appliances (water heater, range, furnace, clothes dryer), wood or coal burners, space heaters, fireplaces or a vehicle running inside the garage. Trained technicians can adjust your appliances to minimize the amount of carbon monoxide gas vented into the living space of your home.

The early signs of exposure to carbon monoxide are often ignored because they can resemble the flu (without the fever). Early warning symptoms should fade while you are away from the house, but worsen when you return home again. These symptoms include sleepiness, dizziness, headache, nausea, watery eyes, fatigue and irregular breathing.

Carbon monoxide attaches to the hemoglobin in your blood and keeps oxygen from reaching your brain and other body organs. Continued exposure to the gas can kill you.

The best protection against the deadly gas is to strategically place carbon monoxide detectors in your home. These detectors cost less than \$50 and are the most reliable way to monitor carbon monoxide levels in your home. Some detectors include an alarm that sounds when exposure limits are reached. Other models have a digital readout that prominently displays the highest detected gas levels over a period of time, sounding its alarm only when acceptable limits are exceeded.

Consider buying a detector as a gift for family or friends. Check the batteries in your own detector and press the test button periodically. Most importantly, follow all recommendations listed in the instruction manual.

Carbon monoxide detectors

- CAN sense dangerous levels of CO in the air.
- CAN provide early warning, often before a healthy adult might show symptoms.
- CAN act as a round-the-clock monitor of CO.
- CAN only sense CO that reaches them. WHERE you place a detector is very important.
- CAN break down like any other electronic device.
- CANNOT work without a power source (batteries or AC).
- CANNOT sense smoke or gas leaks.

(Sources for this article were "The Senseless Killer" and "Combustion Appliances" by the U.S. Consumer Product Safety Commission and Carbon Monoxide Headquarters at www.phymac.med.wayne.edu)



Tips for placing your detector

- READ the instructions included with your detector.
- PLACE near a bedroom or other room where people spend most of their time.
- PLACE where the alarm can be heard.
- DO NOT PLACE detector in the garage, furnace room or near a stove.
- DO NOT PLACE near open windows or doors.
- DO NOT PLACE in excessively hot or cold areas or excessively damp or dry areas.
- DO NOT PLACE a cloth or plastic cover over the detector.

Safety tips

- NEVER burn charcoal indoors.
- NEVER service appliances without proper knowledge, skills and tools.
- NEVER use a gas range or oven for heating.
- NEVER leave a car running in a garage.
- NEVER operate unvented gas-burning appliances in a closed room.

New technology brings big changes to Division for Air Quality

By Larry Garrison
Division for Air Quality

It's no longer business as usual at the Kentucky Division for Air Quality. New technology has revolutionized the division's database of air pollution sources in the Commonwealth.

The Kentucky Emissions Inventory System (KyEIS) includes information on facility locations, the amount and types of pollution emitted, types of pollution control equipment, permitting information, inspection history and compliance information. In the past, the system required



Andrea Wilson uses *i-STEPS infinity*® to enter information on a registered air pollution source in Kentucky. Division for Air Quality photo

users to fill out forms and key-punch data. But now, KyEIS has moved into the next century. On Oct. 5, the division switched to a new software package called *i-STEPS infinity*®. This software allows users to enter data online and immediately see the results of their entries. Employees can also view data and generate reports that can be incorporated into other documents, such as permits and inspections. In addition, the system can be linked to environmental databases used by other departments in the Natural Resources and Environmental Protection Cabinet. This will allow

other divisions to easily access data so they can make informed decisions when permitting or inspecting a facility.

Two receive environmental scholarships

By Maleva Chamberlain
Division of Water

Two students are back in college this school year with scholarships provided by the Kentucky Natural Resources and Environmental Protection Cabinet.

One of those students is Matthew Baker from Maysville, Kentucky. He is pursuing a civil engineering degree at the University of Kentucky.

The other student is Jolene Blanset. She is from Richmond, Kentucky, and is studying toward a master's degree in geology at Eastern Kentucky University.

This is the ninth year for the scholarship program. Its goal is to find candidates for critical environmental job classifications in the cabinet. The scholarships cover the approximate cost of tuition, room and board, books and fees. Recipients of the awards must become enrolled in one of Kentucky's public universities as at least a junior.

They are also expected to accept employment with the cabinet upon graduation.

The Kentucky Water Resources Research Institute and the University of Kentucky Research Foundation administer the scholarship program with the cabinet. Persons interested in applying must file an application with the institute by Feb. 15 to be considered for funding in the following fall semester.

For further information about the program, contact the institute at (606) 257-1299 or Glenda Abrams, Kentucky Department for Environmental Protection, 14 Reilly Road, Frankfort, KY 40601, (502) 564-2150.



Jolene Blanset and Matthew Baker are the most recent recipients of NREPC environmental scholarships. Cabinet photo

New regulations address solid waste facilities

By Anya Armes Weber
Division of Waste Management

Two new regulations deal with solid waste requirements.

401 KAR 48:320 applies to owners and operators of construction/demolition debris landfills that are less than one acre. It includes requirements for liners, leachate collection systems and closure.

401 KAR 47:110 addresses the issuance of registered permits-by-rule (RPBR). It includes guidelines for medical waste transfer stations and performance standard information for all RPBR facilities.

Check out these and other environmental regulations at <http://www.lrc.state.ky.us/kar/TITLE401.HTM>.

Program helps small business tackle big job

By Rose Marie Wilmoth
Air Rep. for Small Business

Workers in Kentucky may have a hand in your favorite pair of shoes or boots, and the state has a hand in helping their employer comply with state regulations.

Employees at Old Kentucky Leathers Inc. in Franklin, finish leather hides that are used to make shoelaces. The laces are purchased by many manufacturers in the U.S. and China.

After Janet Snider became general manager at Old Kentucky Leathers, she realized she needed a helping hand—not to make products for shoelaces, but to bring her business into compliance with Kentucky regulations.

When a team of inspectors from the Department for Environmental Protection visited her company, they told Snider she needed to determine how air toxics regulations apply to her business. Since Old Kentucky Leathers uses over 150 chemicals, making that determination was not going to be easy. When Snider asked what type of help was available, she learned about the Kentucky Business Environmental Assistance Program (KBEAP).

The Kentucky Division for Air

Quality (DAQ) has been funding the program since 1994 to provide air quality compliance assistance to small businesses. These services have been provided through an agreement between the University of Kentucky and the DAQ.

Kentucky's small business assistance program was designed by the state to comply with the federal Clean Air Act Amendments of 1990. The amendments direct each state to establish a program to assist small businesses with regulatory requirements under the act.

Since all clients of the assistance program are provided confidentiality, it is important to note that this company volunteered to describe its experiences with the program.

After working with KBEAP, Snider couldn't say enough about the services her company received. "They pretty much came in and took over. They were wonderful," she said. "Both the Bowling Green and Frankfort Air Quality offices were always willing to help and to locate information for the company as well."

In closing, Ms. Snider said, "If government is going to impose new requirements, then it should give me the



Janet Snider, general manager at Old Kentucky Leathers Inc., stands in front of a rack displaying the variety of finished leather hides prepared by the company and the shoelaces cut from them. Photo by Rose Marie Wilmoth

resources to learn—teach me and show me how to comply." In her opinion, the small business assistance program is a model program to fill those requests.

To request help from the Small Business Assistance Program, call the University of Kentucky at 1-800-562-2327.

Hazardous waste site to be cleaned up by October

By Anya Armes Weber
Division of Waste Management

A Western Kentucky site covered in a hazardous material will be cleaned up before the end of this year. The Muhlenburg County site was vacated in 1993 by Primary Recovery, an aluminum recycling company, after the company declared bankruptcy. The property is covered with salt cake, a byproduct of the aluminum recycling process. Salt cake is a hazardous material and releases ammonia gas when it gets wet.

Details of the site's cleanup plan were discussed Oct. 5 at a community meeting near the site in Drakesboro. State

Superfund Section Supervisor Tim Hubbard and Primary Recovery Project Manager Jeff Grow answered questions at the meeting along with Ginny Gray, a consultant with EnSafe, the company leading the cleanup. "It's been a long, hard-fought battle," Hubbard told the meeting's 25 attendees. "We are appreciative of the community's patience during this process."

EnSafe will hire subcontractors by March 2000, Gray said. Remedial activity will begin in May and site restoration should be complete by October. Gray said the schedule may change depending on spring weather, but work will start "as soon as it's dry enough to get the heavy

equipment in there." Appropriate health and safety measures, including dust control and ambient air monitoring, will be taken during cleanup to ensure the safety of on-site workers and nearby residents. EnSafe will monitor the site until 2005 and beyond if performance standards aren't met.

An agreement on the cleanup was reached in June. Six companies that sent waste to Primary Recovery will pay an estimated \$4 million for the remedial efforts. Connell Limited (parent company of Wabash Alloys) is the lead primary responsible party for the cleanup.

EMPOWER project a success at DEP

The Department for Environmental Protection (DEP) is on a mission to empower its offices, and its efforts are already paying off. EMPOWER Kentucky is Gov. Paul Patton's initiative to improve the delivery of service in state government and to look for ways the Commonwealth can save money. It's a program that is bringing big changes to DEP.

The department received EMPOWER funding to improve the way it handles permit-related tasks. In February 1999, DEP managers locked in on their first EMPOWER target: permit notifications and citizen complaints. Their goal was to establish one common system that could be used by all four divisions—air, water, waste and the environmental services laboratory. To accomplish that goal, the DEP EMPOWER team was established, with one representative from each division and two consultants. The original team consisted of John Lyons, Air Quality; Joy Morgan, Waste Management; Paul Fitch, Water; Dave Falconer, Environmental Services; Don Bowles, consultant; and Owen Pierce, consultant.

The EMPOWER team began to tackle DEP's notifications and complaints processes by assembling a group of experts who know the processes inside and out. This group included DEP complaint coordinators and staff members who receive notifications and complaints. The group worked with the EMPOWER team to re-engineer the notifications and complaints business process. This collaboration resulted in new business rules and operating procedures along with the definition for a new computer system.

In the fall of 1999, the EMPOWER team developed a training manual for the new process and computer system and began to train its Frankfort and field office employees on its use. As employees were trained, the system was installed on their computers and they were able to begin

using it immediately. Training of the employees is now complete and the first mission is accomplished for the EMPOWER team.

"Some employees were skeptical about how well the new system would work," said Joy Morgan, a member of the original DEP EMPOWER team. "But when they went through training and saw the new procedures, they were pleasantly surprised."

"The staff's acceptance and support of the new system has been tremendous," said John Lyons, a member of the EMPOWER team. "Most everyone has provided positive feedback. The involvement of the staff was essential in creating a system that truly is an improvement in the way we conduct business."

The new system has many benefits. First, it allows for complaints and notifications to be immediately dispatched to the appropriate regional office staff members electronically. Regional office personnel receive the information faster and can respond more quickly.

The system allows employees to immediately enter a complaint and give the caller an identification number. This is especially important for the callers who

wish to remain anonymous, because it gives them a way to check on the status of their complaint.

The system also allows DEP employees to share information. For

example, an inspector in the Division for Air Quality can see whether inspectors in the Division of Waste Management and the Division of Water have issued notices of violation on a site the air inspector has evaluated. Everyone working on a case can view documents and pictures that have been scanned into the system. Employees no longer have to make phone calls to request that the information be faxed or e-mailed.

Finally, the system provides for

improved tracking of complaints. Work is assigned to employees directly through their computer. Managers can check the system to determine what progress has been made on a complaint. They can also generate reports from their desks on a variety of subjects, including the total number of complaints addressed by DEP employees and how many resulted in notices of violation.

"I am excited by the development of a combined notification and complaint tracking system and truly believe that it will drastically cut duplication and effort," said Bill Burger, DEP field operations branch manager. "The commitment to provide state-of-the-art computer equipment to regional offices, plus the ongoing process development, will allow DEP field operations groups to better fulfill their missions."

The team receives plenty of management support. Team members meet once a week with a steering committee comprised of division directors and members of the commissioners' offices. This committee provides long-term management of the EMPOWER team's efforts and must approve all of the team's plans. There is also an oversight committee made up of NREPC managers that is briefed on the status of DEP's EMPOWER projects once a month.

The inspection process is the EMPOWER team's current project. The team plans to begin training employees on a re-engineered inspection process in February or March 2000.

The permit issuance process will be the next target for the EMPOWER team, and team members plan to work on the enforcement, compliance and monitoring procedures in the future.

In November, Gayleen Mauer replaced Joy Morgan on the team, after Morgan accepted a position as director of the Division of Administrative Services. Morgan says her work on the DEP notifications and complaints system was a rewarding experience. "It was very exciting to be a part of the project. It was really great to have the management support and funding we needed to get the job done."

"The staff's acceptance and support of the new system has been tremendous. The involvement of the staff was essential in creating a system that truly is an improvement in the way we conduct business."

John Lyons
EMPOWER team member

Dept. for Surface Mining “Empowers” its mapping system

By Charles Oldham

Department for Surface Mining Reclamation and Enforcement

Technology is changing the way the Department for Surface Mining Reclamation and Enforcement (DSMRE) does business. The department is turning paper and plastic maps into electronic documents as part of Gov. Paul Patton’s EMPOWER Kentucky program. EMPOWER’s goal is to improve the way state government serves its “customers.”

The DSMRE believes it can provide better and faster customer service by making some key information available electronically. The department maintains a graphic database of all mining activities permitted since 1961. Until now, this database has only existed on mylars—pieces of frosted plastic film that can be laid over maps supplied by the United States Geological Survey (USGS). Combining the maps and the mylars gives users an overview of what areas have been permitted for coal mining throughout the state.

“The data that is shown on the maps is extremely important and useful for geologists and other professionals who need to know the identity and aerial extent of active and abandoned coal mines, as well as the projected extent of future coal mining operations,” said Donald Lumm, a mineral assessor senior for the Kentucky Revenue Cabinet.

The DSMRE wants to make it easier for employees and customers to access these overlay maps without having to physically assemble them. So, the department is in the process of inputting the maps into an electronic system. This will allow employees to access the maps from their desktop computers.

In the near future, the DSMRE hopes to make the maps available for downloading through its Web site. Inquiries concerning the status of the DSMRE’s electronic mapping program should be addressed to Daryl Hines, DSMRE Information Systems Support Branch, #2 Hudson Hollow, Frankfort, Kentucky 40601, (502) 564-6940, daryl.hines@mail.state.ky.us.



A sheet of mylar overlaying a topographic map depicts a contour surface mine with associated hollowfills, sediment ponds and access roads. Sketch by Charles Oldham



Franklin County High School graduate Bethany Harrod is scanning a sheet of mylar. The Department for Surface Mining Reclamation and Enforcement employed Bethany as an environmental engineering aide last summer. Photo by Ralph King

Secretary Bickford begins second term of service

By Heather Frederick
Public Information and Education Branch

Secretary James E. Bickford took the oath of office for a second time on Dec. 14, 1999. The secretary was sworn in by Franklin Circuit Court Judge William L. Graham for another four years as head of the Natural Resources and Environmental Protection Cabinet. Secretary Bickford was one of 19 members of the governor's second-term Executive Cabinet that took part in the ceremony in the State Reception Room of the Capitol. Ten of those individuals were members of the governor's first cabinet.

"I'm grateful for the willingness of these people to sacrifice and serve in our second term for the citizens of Kentucky," Governor Patton said. "I expect these next four years will be as exciting and productive as the first four."

"I have enjoyed my first four years as a member of Governor Patton's team," Bickford said. "I feel our cabinet has made great strides under his administration, especially in the areas of illegal dumping and the regionalization of water and sewer systems. We will work hard to make the next four years even more successful. Our focus is on cleaning up Kentucky."



Secretary James E. Bickford (left) is sworn in for a second time by Franklin Circuit Court Judge William L. Graham in the State Reception Room of the Capitol. Photo by Richard Thomas



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